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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/644,574	08/18/2003	Fletcher A. Blackmon	83046	6609

7590 07/29/2004

Naval Undersea Warfare Center Division, Newport
Office of Counsel
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Newport, RI 02841-1708

EXAMINER

PIHULIC, DANIEL T

ART UNIT	PAPER NUMBER
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3662

DATE MAILED: 07/29/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/644,574

Applicant(s)

BLACKMON ET AL.

Examiner

Daniel Pihulic

Art Unit

3662

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-11 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-4,8 and 11 is/are rejected.
- 7) ☒ Claim(s) 5-7,9 and 10 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 18 August 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. ____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date ____.
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date ____.
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: ____.

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-4, 8 and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gateman in combination with Ngoi et al. The Gateman reference discloses the utilization of an apparatus for enabling acousto-optic communication from water to air comprising: an acoustic projector (5) positioned below a surface of the water; an optical interrogation beam transmitter (8) to transmit an interrogation beam (6) from the air toward the surface of the water (4); an optical interrogation beam receiver (9) to receive a reflection of the interrogation beam from the surface of the water; and processor (10) to detect a Doppler shift as recited in claims 1 and 8. The difference between the Gateman reference and the claims is that the claims recite the utilization of an

interferometer. The Ngoi et al. reference teaches that it was well known in the art to utilize an interferometer to detect the Doppler shift of a vibrating surface. It would have been obvious to modify the Gateman reference to utilize an interferometer as motivated by the Ngoi et al. reference to enable the Gateman system to accurately measure the Doppler shift induced by a vibration.

With regards to claim 2 the Gateman reference discloses the utilization of a laser (8).

With regards to claims 3 & 11 the Ngoi et al. reference discloses the utilization of a beam splitter (17).

With regards to claim 4 the Ngoi et al. reference discloses the utilization of a laser Doppler vibrometer (see column 1, lines 17-21).

3. Claims 5-7, 9 and 10 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

4. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The Rines reference discloses a radar bases system to detect underwater signals from a submarine.

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Daniel Pihulic whose telephone number is 703-306-

4168. The examiner can normally be reached on Monday through Thursday from 7 a.m. to 5 p.m. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thomas Tarcza, can be reached on 703-306-4171.

The fax phone numbers for the organization where this application or proceeding is assigned are:

703-872-9306 for official responses, and

703-746-3847 for unofficial communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-1113.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Daniel Pihulic
Primary Examiner
Art Unit 3662